# 9. DATA

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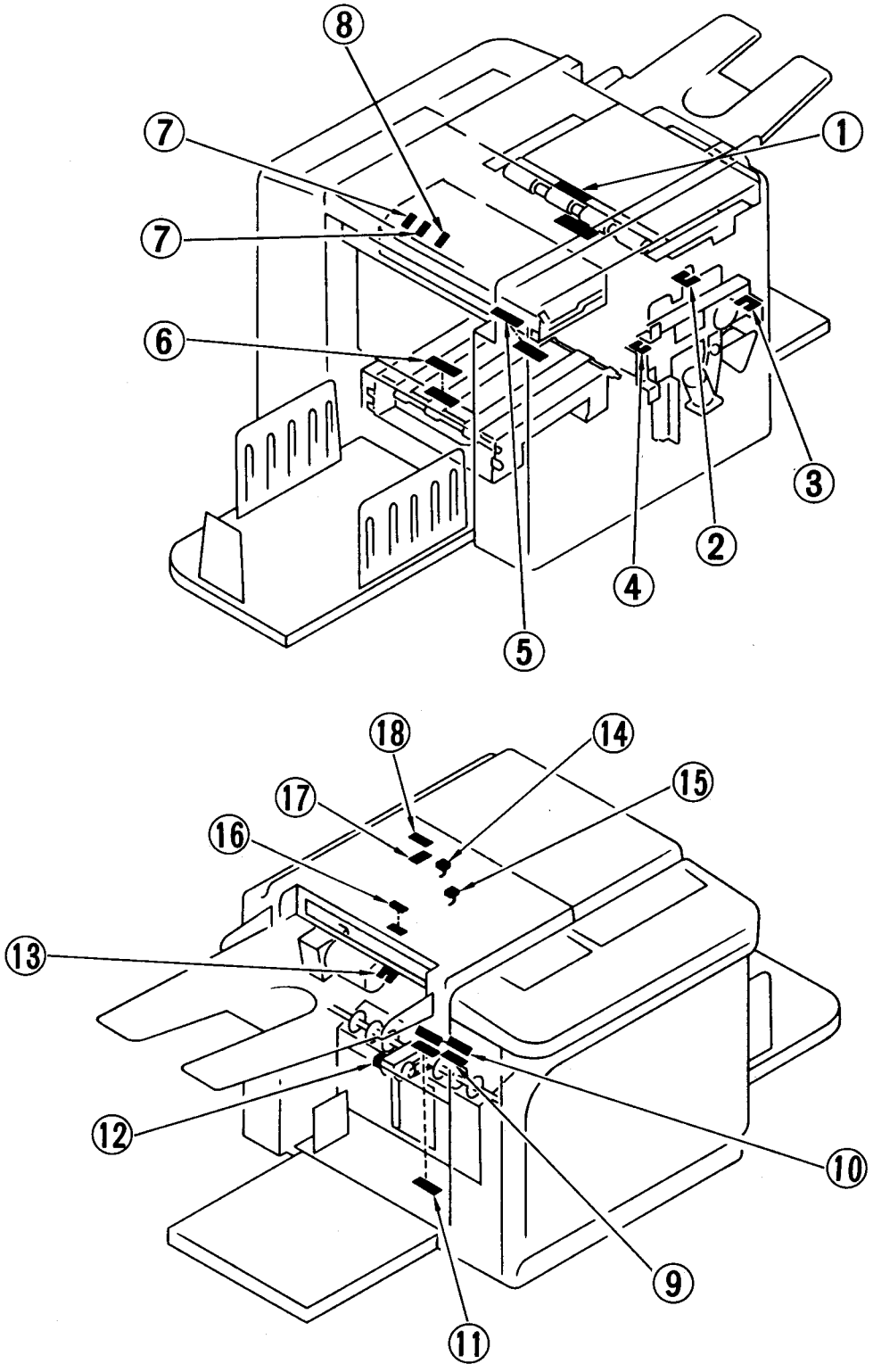
# 3. Location and Function of Electrical Parts

## 1. Photo Sensors

| No. | Name and Type | Function | Display |
|---|---|---|---|
| 1 | Master removal sensor (Transmission type) | To check the advance of used masters into the Disposal box | "USED MASTER NOT DISCHARGED PULL OUT DRUM AND CHECK" "MASTER JAM IN MASTER DISPOSAL UNIT" |
| 2 | Vertical centering sensor (Photointerrupt type) | To reset the vertical print position to the center | "T5 CALL SERVICE" |
| 3 | Paper feed clutch sensor (Photointerrupt type) | To control the operation of the Paper feed clutch | |
| 4 | Pressure detection sensor (Photointerrupt type) | 1) To support other sensors to check paper jams<br>2) To change rotation speed of the Main motor to 15 rpm<br>3) To turn the Pressure solenoid off<br>4) To increase the Copy counter a digit | |
| 5 | Paper receiving sensor 1 (Transmission type) | To check the paper transfer under the Separator | "PAPER JAM UNDER DRUM / PULL OUT DRUM" "PAPER JAM / CHECK PAPER FEED AREA" |
| 6 | Paper receiving sensor 2 (Transmission type) | To check the paper transport to the Paper receiving tray | "PAPER JAM UNDER DRUM PULL OUT DRUM" |
| 7 | Master end sensor (Reflective type) | To check the end of the master roll | "REPLACE MASTER ROLL" |
| 8 | Master detection sensor (Reflective type) | To check the loading of master material | "SET LEAD EDGE OF MASTER UNDER GREEN FILM" |
| 9 | Paper buckle detection sensor (Actuator type) | To determine the amount of first paper feed (buckle) | |
| 10 | Paper sensor (Transmission type) | 1) To check the paper transport in the paper feed area<br>2) To turn the Pressure solenoid on | "PAPER JAM UNDER DRUM / PULL OUT DRUM" "PAPER JAM / CHECK PAPER FEED AREA" |
| 11 | Paper detection sensor (Transmission type) | To check the status of the paper on the Paper feed tray "ADD PAPER" | "ADD PAPER" |
| 12 | Elevator upper limit sensor (Actuator type) | To determine the stop position of the Paper feed tray elevation | "T2 CALL SERVICE " |

| No. | Name | Function | Display |
|---|---|---|---|
| 13 | Encoder sensor (Photointerrupt type) | To detect the rotation speed of the Main motor | |
| 14 | Original detection sensor (Actuator type) | To check the placing of originals into the Original-feed table | "SET ORIGINAL IN PLACE" |
| 15 | Original registration sensor (Actuator type) | To check the transport of an original before the Image scanning area | "ORIGINAL MISFEED RESET ORIGINAL" |
| 16 | Original IN sensor (Transmission type) | To check the transport of an original through the Image scanning area | "ORIGINAL JAM / RESET ORIGINAL"<br>"ORIGINAL JAM OR OVER-SIZE / REMOVE JAMMED ORIGINAL" |
| 17 | Master sensor (Reflective type) | To check the status of the master on the drum | "NO MASTER ON DRUM/ SET ORIGINAL IN PLACE AND PRESS START BUT-TON"<br>"MASTER CLAMP ERROR / PRESS RESET BUTTON" |
| 18 | Master positioning sensor (Reflective type) | 1) To check the advance and feed of master mate-rial<br>2) To check the presence of master material under the cutter unit | "MASTER CUT MALFUNC-TION / PRESS RESET BUTTON"<br>"MASTER MIS-FEED / RESET MASTER"<br>"REMOVE CUT MASTER STRIP" |

## [Location of Photo Sensors]

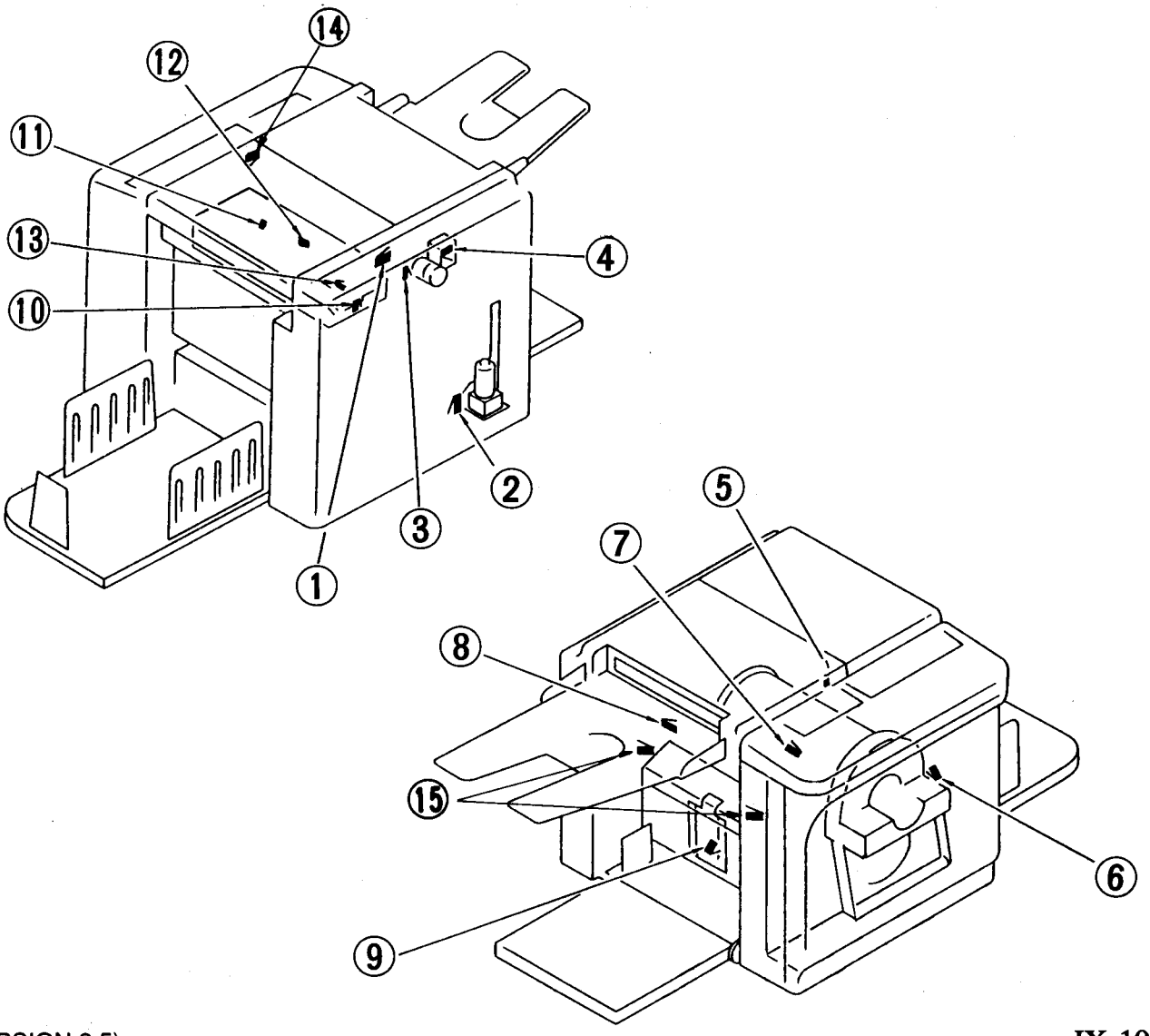


## 2. Micro Switches

| No. | Name | Function | Display |
|---|---|---|---|
| 1 | Original-feed table set switch | To check the setting of the Original-feed table | "SET ORIGINAL FEED TABLE IN PLACE" |
| 2 | Elevator lower limit switch | To determine the lowest stop position of the paper feed tray | "T2:CALL SERVICE" |
| 3 | Clamp safety switch | To check the operation of the Clamp solenoid | "T3:CALL SERVICE" |
| 4 | Range setting switch | To detect the Clamp solenoid operation to reduce the current flowing to the solenoid for the prevention of overheating | |
| 5 | ADF Interlock switch | To check the status of the ADF cover<br>If not pressed, the operation of the Image scanning section is prohibited. | |
| 6 | Drum set switch | To check the status of the Drum | "SET DRUM IN PLACE" |
| 7 | Ink bottle switch | To check the status of an ink bottle | "SET INK BOTTLE IN PLACE" |
| 8 | Disposal box set switch | To check the status of the Master disposal box | "SET MASTER DISPOSAL BOX IN PLACE" |
| 9 | Stack paper feed switch | 1) To detect multiple-sheet feed<br>2) To interrupt the Paper feed clutch during multiple feeding | |
| 10 | Cutter position switch | To determine the stop position of the Rotary cutter | |
| 11 | TPH home position switch | To determine the home position status of the Thermal print head | |
| 12 | TPH pressure switch | To determine the pressure of the Thermal print head against the Write roller during master making | |
| 13 | Master loading unit switch | To check the status (open/close) of the Master loading unit | "CLOSE MASTER LOADING UNIT" |

| No. | Name | Function | Display |
|---|---|---|---|
| 14 | Original-feed table interlock switch | To check the status of the Original-feed table<br>If not pressed, the operation of the Main motor is prohibited and the power to the thermal print head is interrupted. | T1 : CALL SERVICE |
| 15 | Feed tray safety switch | To protect an operator from the danger of catching hands with paper side guides.<br>If not pressed, the operation of the Elevator motor is prohibited. | T2 : CALL SERVICE |

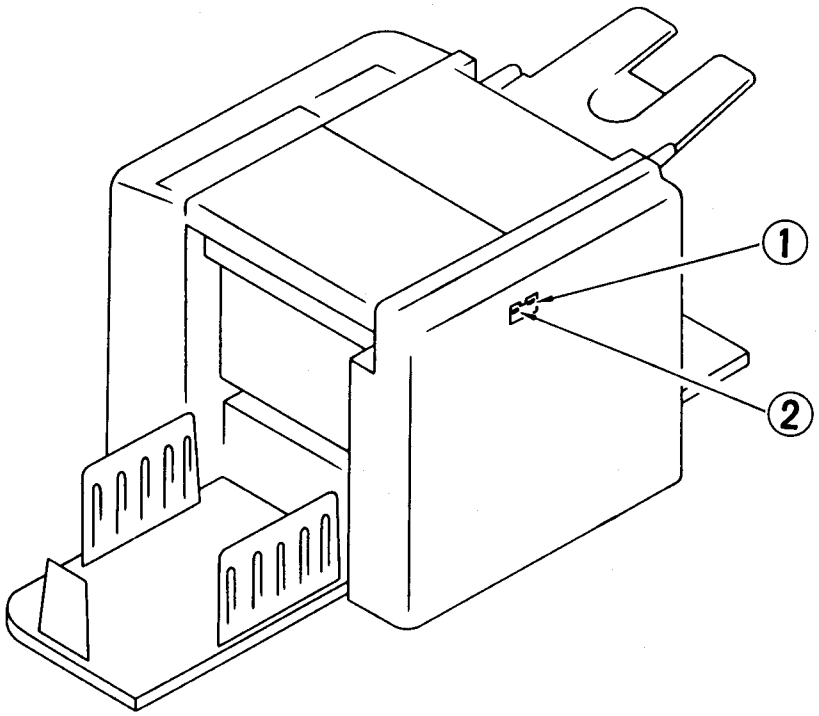
## [Location of Micro Switches]

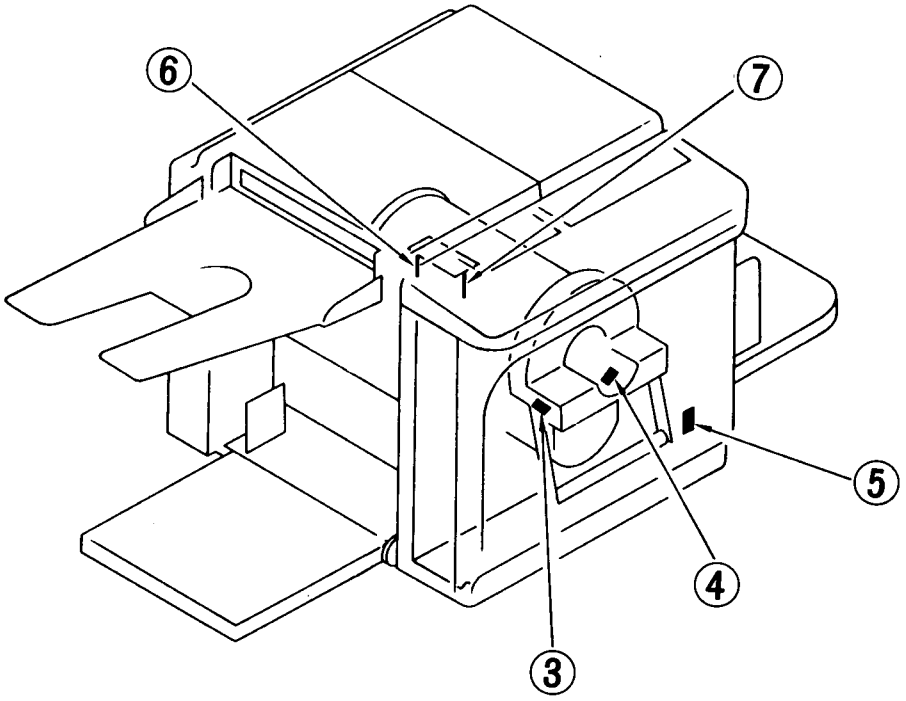


# 3. Other Sensors

| No. | Name and Type | Function | Display |
|---|---|---|---|
| 1 | 0° Angular sensor (Hall IC) | To check the closing operation and closed condition of the Clamp plate | "T3 CALL SERVICE" |
| 2 | 180° Angular sensor (Hall IC) | To check the opening operation and open condition of the Clamp plate | "T3 CALL SERVICE" |
| 3 | Magnet A detection sensor (Hall IC) | To check the home position of the Drum<br>This sensor functions with the other sensors in order to detect several operations. | "T1 CALL SERVICE" |
| 4 | Magnet C detection sensor (Hall IC) | To check the Drum positions during rotation<br>C-1: To detect errors with the Master sensor<br>C-2: To determine the position of master cutting | "MASTER CLAMP ERROR / PRESS RESET BUTTON" "NO MASTER ON DRUM/ SET ORIGINAL IN PLACE AND PRESS START BUTTON" |
| 5 | Front cover set sensor (Magnetic reed switch) | To check the status (open/ close) of the Front cover | "CLOSE FRONT COVER" |
| 6 | Overflow sensor (Static capacitance sensor-antenna) | To detect the overflow of ink in the Squeegee unit | "T4 CALL SERVICE" |
| 7 | Ink sensor (Static capacitance sensor-antenna) | To check the amount of ink in the Squeegee unit | "REPLACE INK BOTTLE" |

## [Location of Other Sensors]

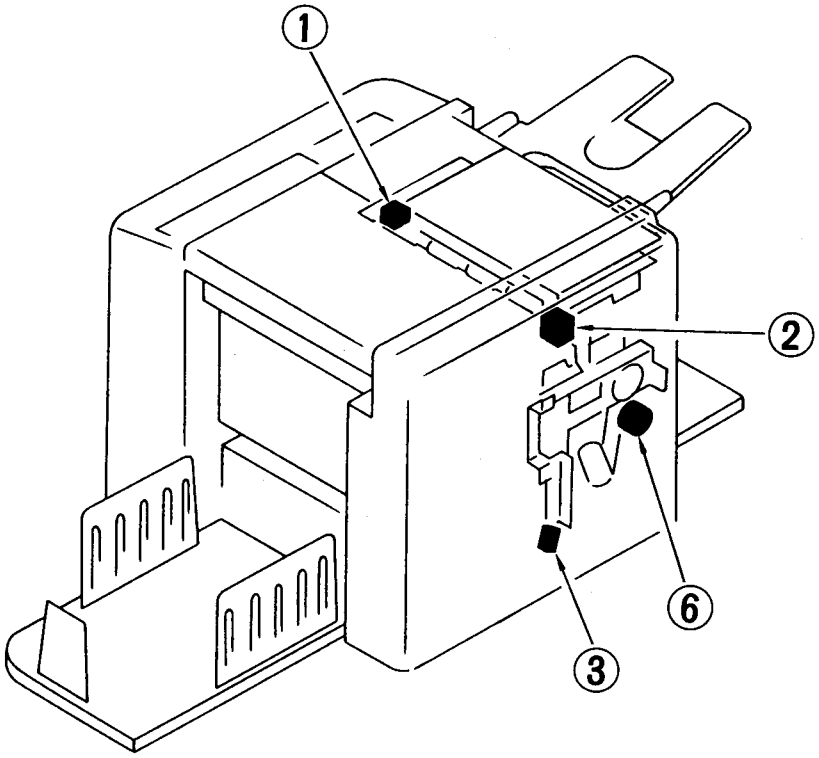


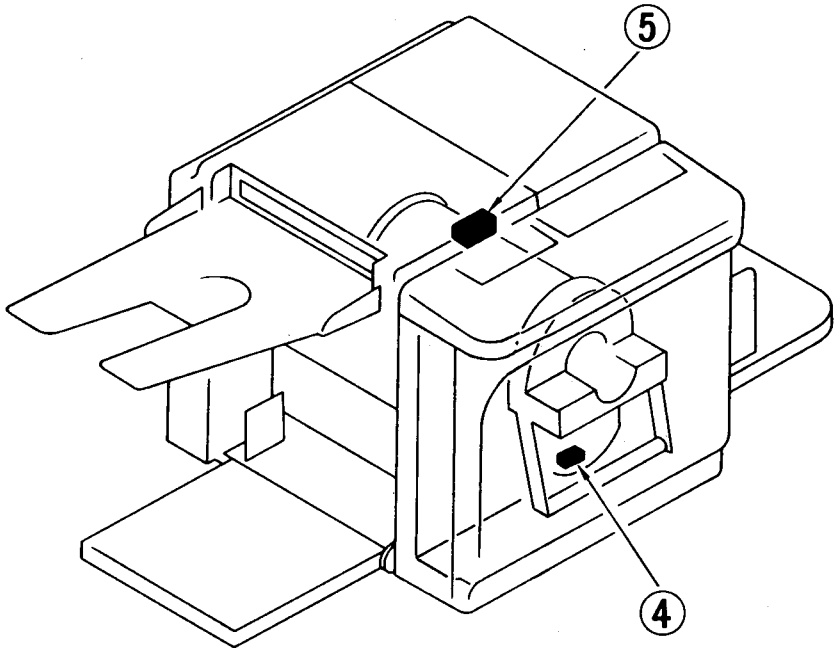



# 4. Solenoids

| No. | Name | Function |
|---|---|---|
| 1 | Master removal solenoid | To activate the Master removal hooks for removing an used master from the Drum |
| 2 | Clamp solenoid | To lower the Clamp motor unit to the Drum for opening/closing the Clamp plate |
| 3 | Pressure solenoid | To activate the Pressure hook for raising the Pressure roller |
| 4 | Lock solenoid | To release the Drum lock for replacement operation (at the Magnet A detection position) |
| 5 | Original feed solenoid | To lower the Original stopper and the Original feed roller |
| 6 | Paper feed clutch | To transmit the rotation of the Main motor to the Pickup and Scraper rollers |

## [Location of Solenoids]

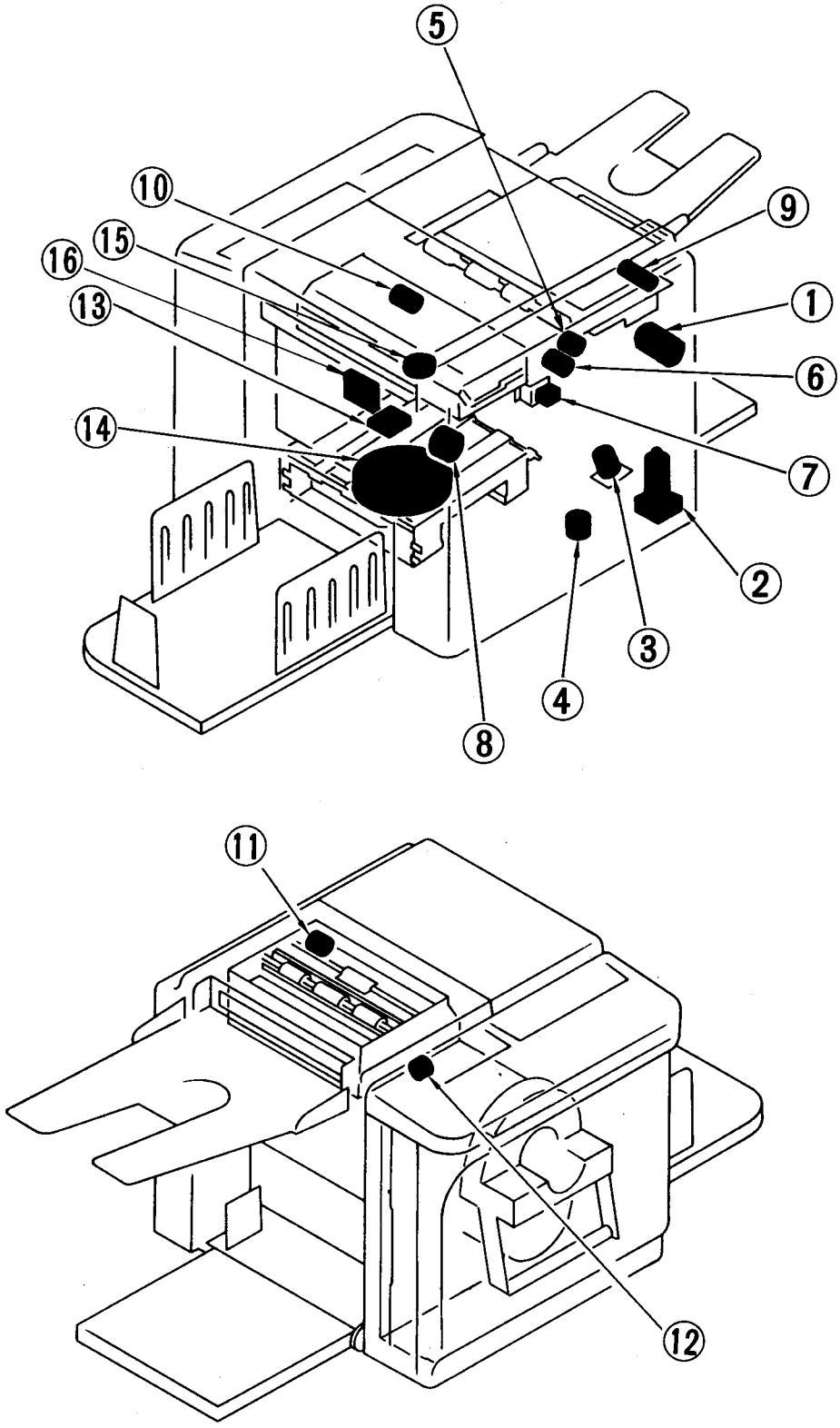


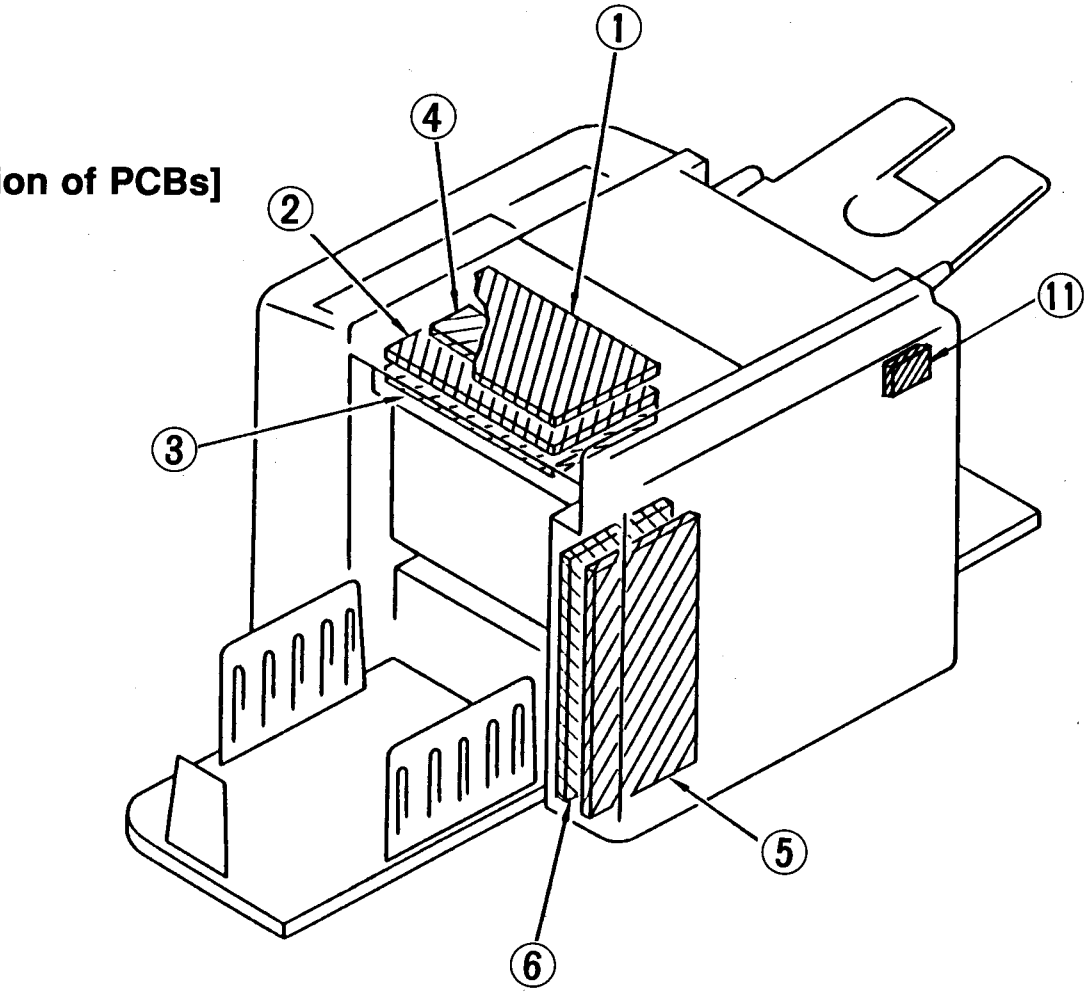
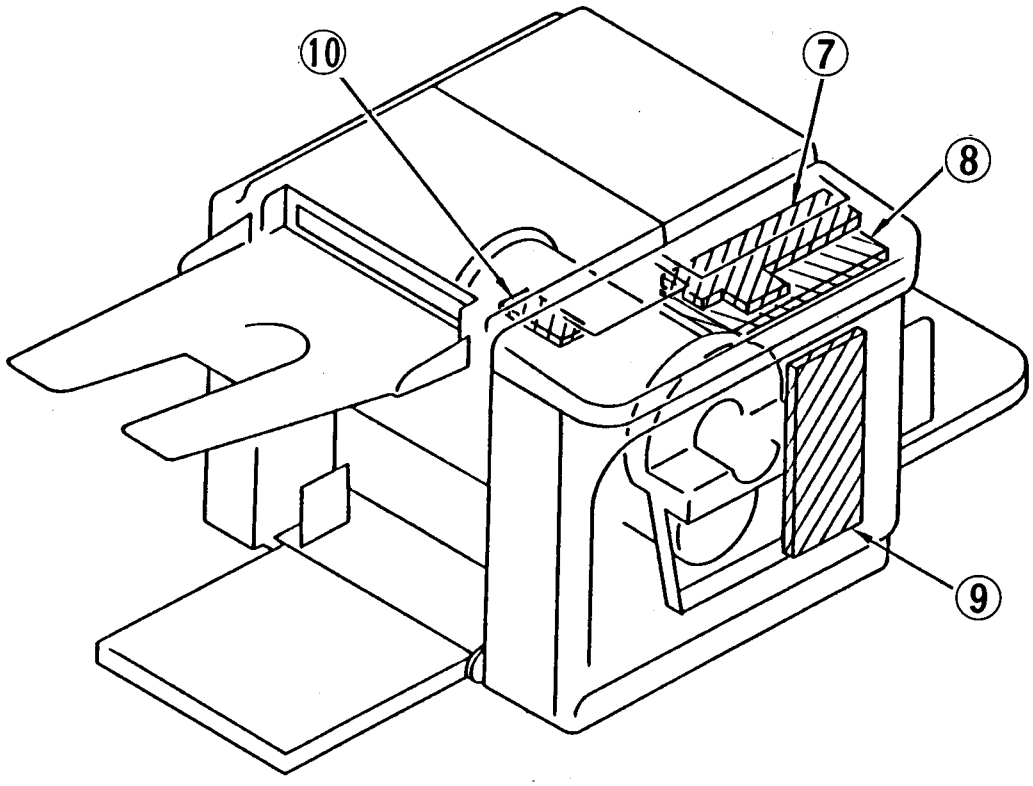
# 5. Motors & Fans

| No. | Name | Function |
|---|---|---|
| 1 | Main motor | To rotate the drive system |
| 2 | Elevator motor | To elevate the Paper feed tray (up and down) |
| 3 | Pressure control motor | To change the printing pressure of the Pressure roller |
| 4 | Print positioning motor | To change the vertical print position |
| 5 | Clamp motor | To open and close the Clamp plate |
| 6 | Cutter motor | To rotate the Rotary cutter for cutting master |
| 7 | Loading pulse motor | To advance and load master onto the Drum |
| 8 | Write pulse motor | To drive master material under the Thermal print head |
| 9 | Master removal vertical transport motor | To lead an used master into the Master disposal box |
| 10 | Thermal pressure motor | To drive the Thermal print head (up and down) |
| 11 | Read pulse motor | To drive original through the Image scanning area |
| 12 | Inking motor | To pump ink from the Ink bottle into the Squeegee unit |
| 13 | Storage fan | To Draw master into the Master stocker during master making |
| 14 | Suction fan | To draw paper to the Paper receiving transfer belts |
| 15 | Separation fan | To assist in the operation of separating paper from the Drum |
| 16 | Loading fan | To prevent master wrinkle during loading master onto the Drum |
| | | |

## [Location of Motors & Fans]



# 6. PCBs

| No. | Name | Function |
|---|---|---|
| 1 | Digitizer PCB (In RC5600D) | To control the editing functions of the Digitizer |
| 2 | Image processing PCB A | For image processing |
| 3 | Image processing PCB B | |
| 4 | Image processing PCB C (In RC5600 & 5600D) | |
| 5 | System Main PCB | To control the Main motor and to process the signals from sensors |
| 6 | System drive PCB | To control the operation to drive the motors and solenoids |
| 7 | Panel switch PCB | To accept the input signal from the Operation panel keys |
| 8 | Panel Main PCB | To control machine operations |
| 9 | Power supply PCB | To convert the input power to 5V,+12V,and 24V and supply them to circuitry |
| 10 | Drum PCB | To control the Ink sensor and Overflow sensor in the Drum |
| 11 | Pressure control PCB (In RC5600 & 5600D) | To control the Pressure control motor |

## [Location of PCBs]